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M. C. GODBE, III
Geological Engineer

April 18, 1986

refer to: SDL Project
PRO/027/008
Millard Co., Utah

State of Utah
Natural Resources, Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

ATTN: D. Wayne Hedberg, Permit Supervisor/Reclamation Hydrologist

Gentlemen;

In response to your letter of April 4, 1986 RE: Completeness reviews of MR-1 Application, Mining and Reclamation Plan, Sevier Dry Lake Project, PRO/027/008, Millard County, Utah please be advised of the following:

Title 40-8-17(1) Other Permits - DWH

1. The State Department of Environmental Health

   On April 10, 1986 the writer contacted Dennis Dalley by telephone (538-6121) regarding the subject project. Mr. Dalley suggested that we needed to discuss the project with the Water Pollution Control Section. On April 15, 1986 Mr. Charles Dietz was contacted by telephone (533-6146) and the project discussed in detail. At Mr. Dietz request a copy of maps and our Memorandum report as submitted to you was transmitted to the Bureau of Water Pollution Control-Attn: Dietz (Copy of covering letter attached hereto).

2. The State Historic and Preservation Office

   On April 10, 1986 the writer contacted Jim Dkyman by telephone (533-5755). After a discussion of the project in detail, it was Mr. Dykmans opinion that input from the Historic and Preservation Office would not be required as archaeological study requirements would be a decision of lease on State lands (copy of gravel lease application for affected lands included) and the United States Bureau of Land Management (copy of Prospecting Permit stipulations included).

3. Utah State Division of Water Rights (Dam Safety)

   On March 3, 1986 the writer in company with Oliver W. Gushee, Jr. met with Richard B. Hall, Directing Engineer for Dam Safety, State Engineers Office, 1636 West North Temple, Salt Lake City, Utah at which time the varying aspects of the Sevier Lake protective dike program were discussed. On March 4, 1986 a complete copy of our application was mailed was mailed to Mr. Hall (copy of covering letter attached).

4. United States Bureau of Land Management

   On March 4, 1986 copies of our application were transmitted to the Richfield District Office (copies of covering letters and April 4, 1986 response attached).

5. The United States Bureau of Reclamation and Army Corp of Engineers have no present jurisdiction or responsibilities which includes the subject area.

Rule M-3(2) Maps and Plans - DMW

As to the request for description of test evaporation ponds etc. please be advised that our present application deals only with construction of the protective dike. The exploration-development project will be phased in several steps. Until the dike is in place and surface flood waters are controlled the design and placement of test evaporation ponds can not be established. Additional facilities such as pond area, dike position and height is expected to be handled uhder an approved modification of existing permits, or as an independent new application, whivhever is most appropriate.

Rule M-3(2) Reclamation Plans - DMW

Our present plan is not to abandone the protective dike. The purpose of the dike is to remain as a permanent structure to protect against future flooding of production facilities which are expected to be sited in the southern section of the Sevier Lake Basin once surface waters have retreated. In the event that the project is abandoned or the dike structure is no longer deemed an essential part of the project, we would anticipate breaching the structure to insure unrestricted drainage and surface water flow. Based upon experience in the Great Salt Lake

area, breaching would allow the lake to reclaim fill leaving a smooth undisturbed surface. Barrow material, based upon Size Sieving tests will be similiar in composition to existing Sevier Lake Basin bottom sediments containing in excess of 60% clay fraction.

Should breaching and natural settlement not prove satisfactory, then the reclamation plan predicates physically removing dike fill material and distributing it evenly over the lake basin peripheral to the alignment. Such a procedure would be accomplished by use of a back hoe and/or dragline using the top dike crest as an operating platform and reclaiming the material from one terminal end, retreating as work progresses toward the opposite terminal end.

Using estimates derived from conferences with Tom Wolff of Wolff Excavating, Inc. based upon experience at Morton Salt and Great Salt Lake Minerals & Chemicals as primary and subcontractor, a cost of Seventyfive Cents to One Dollar per cubic yard for removal and reclaiming as described above is indicated.

Removal and spread reclamation cost based upon 160,000 yd^3 (reference to page 3, section 2-8, Memorandum-Mining Plan of Operations 3/3/86) is expected to total 120,000 to 160,000 Dollars. We have used the Wolff figures here as they are based upon actual recent operating costs including contractor profit under similiar conditions. While conditions are expected to vary estimates here are considered to be a worst scenario. Primary breaching and settlement procedures would be substantially less expensive.

Respectfully submitted

M. C. Godbe, III
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tel. 801/532-2506

April 15, 1986
SDL Project
Millard County, Utah

Dike Construction Barrow Material: SIZE SIEVING ANALYSES

Size	Location N½NE¼NW¼-32 T.22S, R.11W	% portion	Location E½SW¼SW¼ T.22S,R.11W	% portion
+1"		24.05		6.9
+.75"		2.53		3.45
+.5"		3.79		6.9
+.25"		4.43		19.83
+.185"		1.89		11.21
+.0787"		1.04		16.42
+.0165"		19.57		21.57
-.0165"		42.66		13.70

represents 60% clay fraction. 40%+ clay fraction is considered good for pond bottoms. Material represents a good dike material.

Density readings-surface waters

7/24/85:	Sevier Dry Lake	1.026 (3.8% dissolved solids)
1	Great Salt Lake	1.038 (5.5% dissolved solids)
3/9/86	Sevier Dry Lake	1.032 (4.8% dissolved solids)
	Great Salt Lake	1.0365 (5% dissolved solids)

Precipitation balance: to date 1986 year

Great Salt Lake Drainage Basin	125 to 135% of normal
Sevier Lake Drainage Basin	80 to 90% of normal

April 15, 1986:	Level at Great Salt Lake	4210.85 feet m.s.l.
	Historic high June 1873	4211.6 feet m.s.l.
	Predicted 1986 peak	4211.7 feet m.s.l.

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